

01/16

ROUTE SLIP
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Date _____
Karen Floumeny
EPA

- Approval
- Necessary action
- Prepare reply
- Comment
- Note and return
- Note and file
- Investigate
- Signature
- Confer
- As requested
- For information
- Per telephone conversation

REMARKS

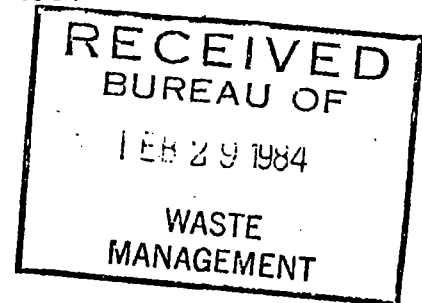
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M1-548

VULCAN CHEMICALS

James M. Boyd
Plant Manager

February 27, 1984



John Paul Goetz
Bureau of Sanitary Waste
Hazardous Waste Division
Kansas Department of Health and Environment
Forbes Field
Topeka, Kansas 66620

Dear Mr. Goetz:

Enclosed is the Resource Conservation and Recovery Act Groundwater Monitoring Report for 1983. By operating Lined Pond No. 2 (LP-2) as a hazardous waste storage pond, Vulcan is required to submit this report.

As of May 11, 1983, LP-2 has been removed from service as a hazardous waste storage facility. On June 24, Vulcan submitted its closure plan to EPA Region VII. After EPA's review, a modified plan was submitted on August 22. EPA Region VII granted approval on October 26. Vulcan intended to complete closure before January 1, 1984, but the cold weather prevented this. Closure will be completed by late spring. Enclosed is the approved closure plan.

As part of the RCRA Groundwater Report, Vulcan is required to demonstrate flow conditions about the hazardous waste facility. In the 1982 report, Vulcan discussed the use of the KV flowmeter for determining flow conditions. During 1983, Vulcan installed new monitor wells for the use of this instrument. Currently, Vulcan is conducting a study, using the new wells, to determine flowrate about the plant. Preliminary tests indicate the flow is less than 2 feet per day. Upon completion of the study, further information will be issued.

Also, enclosed in the groundwater data for the three downgradient wells and one up-gradient well. In previous years, the upgradient well has been 6S-BS. This well is currently "sanded up," so plant water well data are used for background levels.

If you have any questions, please contact Gary Mason at 524-4211, extension 338.

Very truly yours,

A handwritten signature in cursive script that reads "James M. Boyd".

James M. Boyd
Plant Manager

JMB:di
Enclosures

P. O. Box 12283 · Wichita, Kansas 67277 · Telephone 316-524-4211

A Division of **Vulcan Materials Company**

LP-2 CLOSURE PLAN

(1) Removal of Hazardous Waste

The source of hazardous waste has been eliminated by recycling the waste stream back into the cooling tower basin. The waste remaining in the impoundment was removed and disposed in the process wastewater system.

(2) Removal of Residues

Residues still remain in the base of LP-2. These residues will be drummed and disposed in an appropriate landfill. The residues will be tested in accordance with 40 CFR 261, Appendix II, to check for total chromium present. If the results show concentrations greater than 5 ppm, the residue will be disposed in a hazardous waste landfill. If the concentration of chromium is less than 5 ppm, KDHE will be contacted for approval to dispose in a sanitary landfill.

(3) Removal of Liner

The liner (DuPont LD310) will be removed and hauled in bulk to an appropriate landfill. This decision will be based on an EP toxicity test.

After removal of the liner, a piece of the liner (which was located near the bottom of the pond) will be shredded and placed in a container. An EP toxicity test will be performed to determine if the chromate level is below 5 ppm. If the level is above 5 ppm, permit numbers will be obtained for disposal in a hazardous waste landfill. If the level is below 5 ppm, the Solid Waste Section of KDHE will be contacted for approval to dispose in a sanitary landfill. The liner will be temporarily stored in the drum storage area until the ultimate disposal location has been determined.

(4) Removal of Subsurface Soils

To determine the extent of excavation required during closure, core samples have been taken at locations indicated on the attached map. The results of these samples are as follows:

<u>Sample No.</u>	<u>Depth</u>	<u>Total Chromium</u>	<u>RCRA Hazardous Limit</u>
A	0 - 4"	.4 ppm	5 ppm
B	4 - 8"	.2 ppm	5 ppm
C	8 - 12"	.3 ppm	5 ppm
D	0 - 18"	.6 ppm	5 ppm
E	0 - 18"	.6 ppm	5 ppm

Since the chromium concentrations in the soil were less than 5 ppm, Vulcan is not required to remove soil beneath the lined pond. However, to properly install the new liner for use as a nonhazardous waste surface impoundment, soil will be removed.

An estimated 100 cubic yards of subsurface soils will be removed, which defines the base of the lined pond. The dimensions are 50' X 1' X 2'. The 50' defines the length of the base, the 1' is the depth under the liner to the gravel pack and drain pipe, and the 2' width will allow for proper excavation of the V-shaped base.

After the excavation is completed, additional soil samples will be taken to assure that chromates have not accumulated in the gravel pack. The samples will be taken at the same locations as the surface samples. If chromate levels are found above 5 ppm, soil will be removed until the level of chromates in the soil is below 5 ppm.

The subsurface soil will be disposed in accordance to the results of any additional samples.

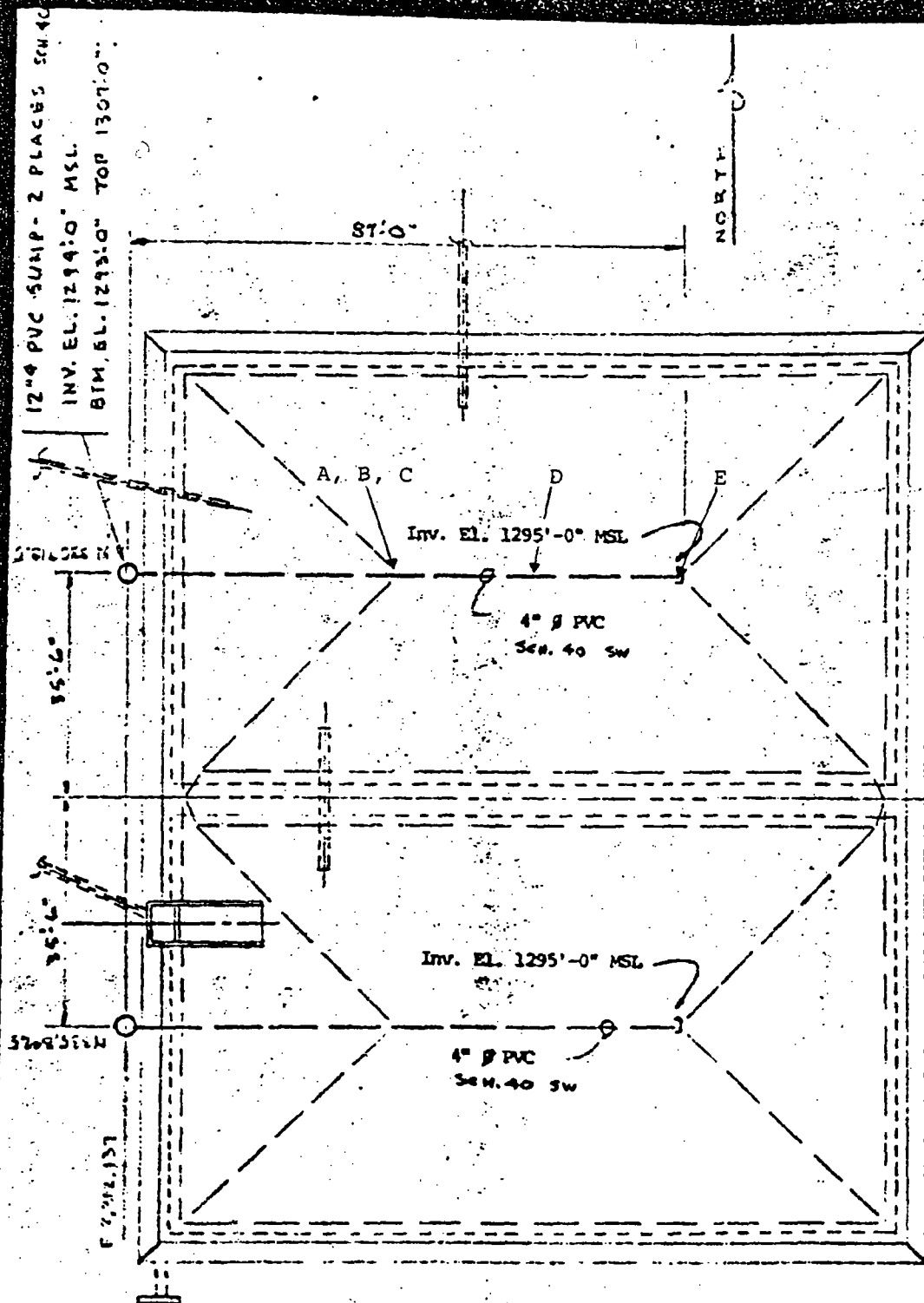
(5) Decontamination of Structure and Equipment

After the removal of the present liner and subsurface soil, the remaining equipment and structures will be decontaminated. The only equipment and structures associated with LP-2 are a pump and connecting piping. A water line will be connected to this equipment for flushing. After the system has been purged (approximately 15 minutes), a sample of washwater will be taken off the pump. EP toxicity test for total chromium will be conducted to assure that the washwater has a chromium level below 5 ppm.

(6) Closure Certification

A local engineering firm will be used to certify that the facility was closed in accordance with this Closure Plan.

The information included is a summary of Vulcan and EPA Region VII correspondence dated June 24, August 4, August 22, and November 4, 1983. Public notice of this closure was issued on September 23 with no comments received. The November 4, 1983 letter from EPA Region VII officially approved this plan for closure of LP-2.



Lined Pond Monitor System

P-24-109-4-500

1983 MONITOR WELL DATA

2S-BS

	<u>3/83</u>	<u>8/83</u>	<u>12/83</u>
CaCO ₃ , ppm	1010	170	830
Chlorides, ppm	1432	73	1960
TOC, ppm	8	7	24

	<u>3/83</u>	<u>3/83</u>	<u>10/83</u>
Chlorosolvs, ppm	9.6	47.0	0.19
Hexachlors, ppb	49.5	38.0	32.6
Chlorophol, ppm	--	--	.3

13 MW

	<u>4/83</u>	<u>8/83</u>	<u>11/83</u>	<u>12/83</u>	<u>12/83</u>
CaCO ₃ , ppm	6100	5600	5740	5080	3940
Chlorides, ppm	16988	15652	15251	13600	13020
TOC, ppm	30	77	5	--	--

	<u>4/83</u>	<u>12/83</u>
Chlorosolvs, ppm	74.9	109.4
Hexachlors, ppb	196.2	1690.0
Chlorophol, ppm	--	5.5

12S-BS

	<u>8/83</u>	<u>8/83</u>	<u>12/83</u>
CaCO ₃ , ppm	2120	2010	1540
Chlorides, ppm	3398	3136	1800
TOC, ppm	19	34	34

	<u>3/83</u>	<u>12/83</u>
Chlorosolvs, ppm	272.7	15.82
Hexachlors, ppb	257.4	172.0
Chlorophol, ppm	--	7.46

PLANT WATER WELLS

	<u>2-23-83</u>	<u>6-28-83</u>	<u>7-8-83</u>	<u>11-30-83</u>
Hardness, ppm	260	320	210	250
Chlorides, ppm	27	32	31	46
Methylene Chloride, ppm	< 0.1	< 0.1	< 0.1	< 0.1
Chloroform, ppm	< 0.1	< 0.1	< 0.1	< 0.1
Carbon Tet., ppm	< 0.1	< 0.1	< 0.1	< 0.1
Perchloroethylene, ppm	< 0.1	< 0.1	< 0.1	< 0.1

WELL NAME: 25 BG

COMPONENT	CONC.	MARCH 83	MARCH 83	OCTOBER 83
METHYLENE CHLORIDE	PPM	ND	< 0.1	0.030
CHLOROFORM	PPM	ND	ND	0.092
CARBON TETRACHLORIDE	PPM	9.6	41.3	< 0.108
PERCHLOROETHYLENE	PPM	ND	5.6	0.062
ETHYLENE DICHLORIDE	PPM			
DICHLOROPROPANE-1.2	PPM			
TRICHLOROETHYLENE	PPM			
TRICHLOROETHANE-1.1.1	PPM			
VINYL CHLORIDE	PPM			
HEXACHLOROETHANE	PPB	1.44	0.37	2.43
HEXACHLOROBENZENE	PPB	3.19	2.16	1.02
HEXACHLOROBUTADIENE	PPB	0.34	0.57	< 0.1
a-HEXACHLOROCYCLOHEXANE	PPB	4.27	1.72	2.3
b-HEXACHLOROCYCLOHEXANE	PPB	ND	0.11	1.8
PENTACHLOROPHENOL	PPB	*	*	ND
TETRACHLOROPHENOL-2.3.4.6	PPB	*	*	230
TRICHLOROPHENOL-2.4.6	PPB	*	*	ND
TRICHLOROPHENOL-2.4.5	PPB			ND
DICHLOROPHENOL-2.4	PPB	*	*	20
DICHLOROPHENOL-2.6	PPB			80
PARA (META) CHLOROPHENOL	PPB	*	*	ND
CHLOROBENZENE	PPB			
B-HEXACHLOROCYCLOHEXANE	PPB	40.31	34.81	25.0
D-HEXACHLOROCYCLOHEXANE	PPB	ND	ND	

WELL NAME: 13 MW

COMPONENT	CONC.	MARCH 83	DECEMBER 83
METHYLENE CHLORIDE	PPM	0.2	26.1
CHLOROFORM	PPM	25.2	92.7
CARBON TETRACHLORIDE	PPM	28.8	14.2
PERCHLOROETHYLENE	PPM	7.6	2.47
ETHYLENE DICHLORIDE	PPM	(0.1	
DICHLOROPROPANE-1.2	PPM		
TRICHLOROETHYLENE	PPM		
TRICHLOROETHANE-1.1.1	PPM		
VINYL CHLORIDE	PPM		
HEXACHLOROETHANE	PPB	82.34	102
HEXACHLOROBENZENE	PPB	ND	1090
HEXACHLOROBUTADIENE	PPB	25.97	(0.1
a-HEXACHLOROCYCLOHEXANE	PPB	13.05	96.0
b-HEXACHLOROCYCLOHEXANE	PPB	21.78	320
PENTACHLOROPHENOL	PPB	*	1010
TETRACHLOROPHENOL-2.3.4.6	PPB	*	1240
TRICHLOROPHENOL-2.4.6	PPB	*	1380
TRICHLOROPHENOL-2.4.5	PPB		ND
DICHLOROPHENOL-2.4	PPB	*	4230
DICHLOROPHENOL-2.6	PPB		5910
PARA (META) CHLOROPHENOL	PPB	*	ND
ORTHOCHLOROPHENOL	PPB		70
CHLOROBENZENE	PPB		
B-HEXACHLOROCYCLOHEXANE	PPB	ND	82
D-HEXACHLOROCYCLOHEXANE	PPB	53.22	

WELL NAME: 125 86

COMPONENT	CONC.	MARCH 83	DECEMBER 83
METHYLENE CHLORIDE	PPM	40.4	6.21
CHLOROFORM	PPM	50.4	8.41
CARBON TETRACHLORIDE	PPM	146.0	0.108
PERCHLOROETHYLENE	PPM	35.4	1.20
ETHYLENE DICHLORIDE	PPM	0.5	
DICHLOROPROPANE-1.2	PPM		
TRICHLOROETHYLENE	PPM		
TRICHLOROETHANE-1.1.1	PPM		
VINYL CHLORIDE	PPM		
HEXACHLOROETHANE	PPB	19.21	57.2
HEXACHLOROBENZENE	PPB	0.51	3.8
HEXACHLOROBUTADIENE	PPB	25.06	21.2
a-HEXACHLOROCYCLOHEXANE	PPB	28.13	21.1
e-HEXACHLOROCYCLOHEXANE	PPB	73.86	42.3
PENTACHLOROPHENOL	PPB	*	100
TETRACHLOROPHENOL-2.3.4.6	PPB	*	ND
TRICHLOROPHENOL-2.4.6	PPB	*	ND
TRICHLOROPHENOL-2.4.5	PPB		ND
DICHLOROPHENOL-2.4	PPB	*	40
DICHLOROPHENOL-2.6	PPB		230
PARA (META) CHLOROPHENOL	PPB	*	ND
ORTHOCHLOROPHENOL	PPB		80
CHLOROBENZENE	PPB		
B-HEXACHLOROCYCLOHEXANE	PPB	ND	26.3
D-HEXACHLOROCYCLOHEXANE	PPB	110.64	

WELL NAME: 10 WW

COMPONENT	CONC.	MARCH 83	OCTOBER 83
METHYLENE CHLORIDE	PPM	ND	< 0.004
CHLOROFORM	PPM	ND	< 0.005
CARBON TETRACHLORIDE	PPM	ND	< 0.108
PERCHLOROETHYLENE	PPM	ND	< 0.004
ETHYLENE DICHLORIDE	PPM	ND	
DICHLOROPROPANE-1,2	PPM	ND	
TRICHLOROETHYLENE	PPM	ND	
TRICHLOROETHANE-1,1,1	PPM		
VINYL CHLORIDE	PPM		
HEXACHLOROETHANE	PPB	0.69	< 0.01
HEXACHLOROBENZENE	PPB	0.91	< 0.03
HEXACHLOROBUTADIENE	PPB	< 0.10	< 0.1
α-HEXACHLOROCYCLOHEXANE	PPB	ND	< 0.1
β-HEXACHLOROCYCLOHEXANE	PPB	ND	< 0.1
PENTACHLOROPHENOL	PPB	*	ND
TETRACHLOROPHENOL-2,3,4,6	PPB	*	ND
TRICHLOROPHENOL-2,4,6	PPB	*	ND
TRICHLOROPHENOL-2,4,5	PPB		ND
DICHLOROPHENOL-2,4	PPB	*	ND
DICHLOROPHENOL-2,6	PPB		ND
PARA (META) CHLOROPHENOL	PPB	*	ND
CHLOROBENZENE	PPB		
β-HEXACHLOROCYCLOHEXANE	PPB	ND	< 0.1
δ-HEXACHLOROCYCLOHEXANE	PPB	ND	